to reply before the leader seeks the thoughts of another contributor. During the course of the discussion, if someone identifies and contributes the idea of a consensus, then the latter has an immediate right to reply and a dialogue can ensue between these two.

Although this procedure can work very well, it too can feel contrived and the children sometimes react to that with frustration. At first the leader is expected to engage in dialogue with each participant. Often he will not know what to say in response and the contribution and the experience can provide valuable insight into what it is to engage in dialogue. Later though, the children learn to distinguish between the kinds of responses which lead themselves to dialogue and others which do not. They can then be the judge and the discussion loosens up, speeds up and becomes more productive and satisfying.

* * *

Small-group discussions are a variation in format and can offer advantages. The children's desks face each other in groups of six or ten. Using the namecards as place cards, the children are seated at the tables at random. A chosen leader may then use the cards to see that everyone has a fair chance to participate. Usually the children have an exercise from the manual to work on and the idea is to discuss, try to reach some consensus, and to record responses and thoughts. Small-group discussion activities are therefore highly structured while providing the children with a lot of opportunity to discuss freely.

One important advantage of this format is that the children have maximum opportunity to participate and some will contribute to small-group discussions when they wouldn't in large-group ones. Another advantage is that these discussions can provide opportunities to practice some of the guidelines and procedures which they have collected in large-group activities. And since they are not under the direct supervision of an authority figure, the children have some freedom in these discussions.

For the teacher (who can't be at every table) however, small-group discussions can be frustrating. Although it is clear that the children are engaged in lively conversation and usually on the topic, it is not at all clear what they are learning from the experience. There is a distinct possibility that what they are having is just a discussion — not necessary a philosophical one. Without the immediate presence of the teacher, they find it all too easy to disregard the very guidelines which they themselves have formulated and which they observe well in large-group discussions. Designated leaders are tolerated but not always respected and the 'natural' leaders find it difficult to resist dominating. Also, children who are characteristically uncooperative tend to take advantage of these distantly supervised groups.

Interestingly, the pilot group's reaction to small vs. large-group discussions changed over time. At first they much preferred small groups precisely because they could participate easily and often. Later, however, as large-group discussions became more productive, the children preferred those. It seemed to be a function of what they felt they got out of the discussion. And that, I like to think, may be a rough measure of the success of the strategies and the degree to which a given discussion 'managed' to be philosophical.

* * *

To describe these strategies one after another and to call them 'management' strategies is perhaps to invite protest for there can be something inherently disagreeable about the very notion of a 'managed' discussion. (One might even wonder if it isn't a contradiction in terms.) Our experience has been that these measures help much more than they hinder. The children contribute to their formulation and, despite their sometimes frequent frustration, they take great delight in seeing them work. Although these particular strategies may or may not work for others, they do work for us because they are ours. They grow out of our experience together and we adjust and refine them as we go along. It is a constructive, creative and often highly philosophical process and it is this process — more than any specific strategy — which is recommended.

Judy A. Kyle

NOTES

2Lipman, Matthew, Harry Stockentner's Discovery, Upper Montclair, NJ: TAPC, 1974

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Philosophy for Children: Exercises and A Social Studies Text

Adapting exercises from philosophy for children programs as well as creating new ones for use with a social studies text marks a special goal of our efforts this year at the Regional Day School for the Deaf in Fort Worth, Texas. In meeting this goal, we are attempting to make conceptual analysis and inductive reasoning integral parts of the general curriculum. A social studies text, *The United States and Its Neighbors*, prompted the adaptation and creation of thinking skills exercises.1 This book, included in a series entitled *The World and Its Peoples*, presents a chapter on "Exploration" in need of conceptual clarification and logical elaboration in the form of such exercises. No thinking skills exercises appear in the "Chapter Review" section of the discussion where a listing of "Key Facts" is included.2 "Quick Guide", a "Review of the Text", and a "Skills Development" project involving use of the library test the reader's comprehension of the text.3 The specially designed exercises add these various reading activities a thinking skills component.

The following report provides a description of the six exercises designed for use with *The United States and Its Neighbors*. Appearing in sets of three, the first set promotes conceptual analysis of a passage; the second set initiates inductive reasoning based upon another passage in that text. Most of the exercises are adaptations of ones found in *In My Neighborhood*. An Instructional Manual to Accompany *Harry Stockenizer's Discovery* (PI) or ones suggested for use with *Rebecca* (R). However, some of the exercises are new creations tailor-made for investigating the topic of "Exploration" as discussed in this particular social studies text.

The need for exercises demanding conceptual analysis grows apparent at the end of a passage which introduces the topic of "Exploration":

*Have you ever gone exploring? Perhaps you have hiked deep into a woods, deeper than you have ever been before. You might have discovered trees or flowers or insects there that were new to you. Maybe you found a stream you didn't know about. You probably brought back a leaf or a plan to show your parents or friends. Or perhaps you moved to another home and went for a walk around your new neighborhood. You might have found streets and buildings you had never seen before and people you had never met. You probably told your family what you had seen. If you have ever done anything like these things, you were exploring. To explore means to search for new things or places. It means making discoveries.*

The last sentence poses the problem. It misleads the reader in its unqualified statement that "to explore . . means making discoveries." Explorations do not always lead to discoveries. Of course, the great explorations launched during the fifteenth, sixteenth, seventeenth, and eighteenth centuries and described in this chapter resulted in discoveries in the New World. However, during the course of the discussion of the chapter, that important qualification may not be brought to bear on this initial generalization. If not, a conceptual confusion regarding the differences between exploration and discovery remains unanswered.

One of the exercises in the set of three focused on this misleading generalization and forced the students to attend to the differences between explorations and discoveries and, in the process, inventions. After establishing which sign would be used for 'explore' (the sign used for 'seek', 'search', 'look for', or 'examine') and 'discover' (the sign used for 'find'), the students began to list examples of explorations and discoveries. Under 'explorations', the students identified the following: exploring for fossils in a cave, exploring for coral near the ocean bottom, and exploring for rocks on the playground. Under 'discoveries,' they proposed the following: Columbus discovering America, Thomas Edison discovering the light bulb, and Benjamin Franklin discovering electricity. The listing of Edison as a discoverer and the light bulb as a discovery provided the introduction of additional categories, 'inventors' and 'inventions,' for clarifying his status. An exercise entitled, "Discovery and Invention," (PI, p. 7) which challenges the students to identify electricity, electric light bulbs, magnetism, magnets, and television as a 'discovery' or an 'invention' helped them to draw distinctions between the two. However, the original distinction between 'explorations' and 'discoveries' was not lost with the introduction of the new category, 'invention.' Returning to the list of explorations and discoveries generated at the outset, the students considered whether exploring the coral on the ocean floor always leads to a discovery of beautiful shell deposits or whether exploring for fossils in a cave always leads to a discovery of animal or plant impressions in stone. One student related that all of Jacques Courante's
that this winter will be colder than last winter. The various choices made by the students provided an opportunity to discuss the differences between the terms as well as identify some of the common misconceptions between them. For example, the students briefly considered whether knowing involves believing and whether hoping involves imagining.

These three exercises emerged as a result of the need to clarify a confusion in the last sentence of the introductory paragraph in the chapter on "Exploration." Each success story studied by one of the classes about finding a fossil without looking for it serves as the goal for the exercise.

Question: How does the exercise help students understand the concept of "exploration"?

Answer: The exercise helps students understand the concept of "exploration" by providing opportunities to discuss the differences between terms such as "believing," "hoping," and "imagining." It also helps them identify common misconceptions between these terms. For example, students briefly considered whether knowing involves believing and whether hoping involves imagining.

Answer: The exercise helps students understand the concept of "exploration" by providing opportunities to discuss the differences between terms such as "believing," "hoping," and "imagining." It also helps them identify common misconceptions between these terms. For example, students briefly considered whether knowing involves believing and whether hoping involves imagining.

Evidence 1
Leif Ericson

The Vikings also passed stories about a great explorer named Leif (son) Ericson. The stories told in the year 1000 Leif Ericson sailed west across the North Atlantic from a Viking settle-
ment in Greenland to a new and unknown land. He named the new land Vinland. The stories also said that after Leif's discovery, other Vikings of Vinland settled in this land. They built stone houses. They planted crops and raised cattle.

But old stories are not proof that something really hap-
pened. If there had been settlement, they had disappeared. Cer-
tainly on other European settlers had followed the Vikings to the new land. However, 20 years ago, archeologists discovered the re-
main of some old stone buildings in Newfoundland. Find No. 1018 was foun-
ded on the eastern coast of Canada. You can see it is not too far from Greenland.

The archeologists could prove that the oldest building they found was both built about A.D. 1000. Many Viking artifacts were also discovered nearby. Now there was real proof that the Vikings had come to North America as early as the year 1000. The distinction suggested in this passage between no proof in the form of old stories and "real" proof in the form of archaeological finds raises the issue of evidence in reasoning inductively. After discussing reasons why old buildings and artifacts provide evidence whereas old stories do not for proof of Viking settlements in the New World, the students engaged in three exercises involving inductive reasoning.

The first exercise in this set, based upon one entitled "Inductive Reasoning," provides evidence that certain conclusions are challenged. The questions are intended to help students reason to evaluate whether the evidence supports or fails to support the conclusion.

Evidence 1: If you see a fish when it is raining, it is likely to be younger than last year. Why?

Answer: The evidence supports the conclusion, 1 or 2?

Evidence 2: If you see a fish when it is raining, it is likely to be younger than last year. Why?

Answer: The evidence supports the conclusion, 1 or 2?

Evidence 3: If you see a fish when it is raining, it is likely to be younger than last year. Why?

Answer: The evidence supports the conclusion, 1 or 2?

Evidence 4: If you see a fish when it is raining, it is likely to be younger than last year. Why?

Answer: The evidence supports the conclusion, 1 or 2?

Evidence 5: If you see a fish when it is raining, it is likely to be younger than last year. Why?

Answer: The evidence supports the conclusion, 1 or 2?

Evidence 6: If you see a fish when it is raining, it is likely to be younger than last year. Why?

Answer: The evidence supports the conclusion, 1 or 2?

Evidence 7: If you see a fish when it is raining, it is likely to be younger than last year. Why?

Answer: The evidence supports the conclusion, 1 or 2?

Evidence 8: If you see a fish when it is raining, it is likely to be younger than last year. Why?

Answer: The evidence supports the conclusion, 1 or 2?

Evidence 9: If you see a fish when it is raining, it is likely to be younger than last year. Why?

Answer: The evidence supports the conclusion, 1 or 2?

Evidence 10: If you see a fish when it is raining, it is likely to be younger than last year. Why?

Answer: The evidence supports the conclusion, 1 or 2?

Evidence 11: If you see a fish when it is raining, it is likely to be younger than last year. Why?

Answer: The evidence supports the conclusion, 1 or 2?

Evidence 12: If you see a fish when it is raining, it is likely to be younger than last year. Why?

Answer: The evidence supports the conclusion, 1 or 2?

Evidence 13: If you see a fish when it is raining, it is likely to be younger than last year. Why?

Answer: The evidence supports the conclusion, 1 or 2?

Evidence 14: If you see a fish when it is raining, it is likely to be younger than last year. Why?

Answer: The evidence supports the conclusion, 1 or 2?
I that this winter will be colder than last winter

The various choices made by the students provided an opportunity to discuss the differences between the terms as well as identify some of the connections between them.

For example, the students briefly considered whether knowing involves believing and whether hoping involves imagining.

These three exercises emerged as a result of the need to clarify a confusion in the last sentence of the introductory paragraph in the chapter on "Exploration." Each success is from one of the chapters about finding a fossil without looking for it which set the course for the next exercise.

The second exercise in this set played on the theme of that story about finding fossils and challenged the students to attribute various ways of thinking to the activities of exploring and discovering. Each student in the class assumed the position of an explorer who aims to discover fossils in a cave. However, being now on their own, each explorer needs a guide to lead him or her into the cave. Six guides are available. Each guide was created for the job as a leader by making one of the following choices.

Guide 1: I believe that there is a fossil in this cave.

Guide 2: I imagine that there is a fossil in this cave...

Guide 3: I know that there is a fossil in this cave...

Guide 4: I know that there are fossils in this cave...

Guide 5: I imagine that there are fossils in this cave...

Guide 6: I believe that there are fossils in this cave...

Each explorer must choose a guide to follow as the basis of that guide's claim. In choosing, the explorer must consider the differences between hoping, guessing, believing, knowing, imagining, and expecting. The different claims provide an opportunity for the children to distinguish between those guides who propose to lead explorations based upon their own discoveries and those who do not.

In the first round of choices, the children decided to follow Guide 2 or Guide 3, treating 'guessing' and 'believing' as synonyms. Might they have been guessing?

The third exercise in this set stated that possibility by asking the children to distinguish between the various claims in another format similar to the one entitled, "Mental Act"(Ph, p. 198). The ten items—hope, believe, imagine, expect—appeared at the top of a piece of paper followed by several sentences in need of a verb. Each student faced the challenge of picking a verb from that list to complete the sentences:

that it will rain tomorrow
that the Dallas Cowboys will beat the Washington Redskins
that the earth is always turning on its axis
that Mr. Reagan is President of the United States

I got sick when I eat cake
I get sick when I eat cake

Proof: It was cold on Monday
It was cold on Friday
It was cold on Wednesday.
It will be cold on Thursday and Friday

In regard to Proof 1, the children immediately offered counter-examples to the argument, pointing to pizza, for example. They felt that a food does not make them sick. They concluded, therefore, that the evidence provided by that proof does not support the conclusion covering all foods.

In regard to Proof 2, the children agreed that the evidence supports the conclusion. A question concerning the need for adding the qualifier, "probably," to the conclusion led to a discussion about the certainty with which forecasters predict the weather. The question, "When do weathermen base their predictions?" ended the first exercise and paved the way for the second.

The second exercise returned to this question after a review of the issue of evidence. The exercise assumed the following form:

Conclusion: Leif Ericson discovered Newfoundland
Evidence 1: Old stories
Evidence 2: Archeological finds

Which evidence supports the conclusion, 1 or 2? Why?

Evidence 1: I am taller than I was last year
Evidence 2: I measured my height and found myself to be taller

Which evidence supports the conclusion, 1 or 2? Why?

Conclusion: This winter will be colder than last winter

Evidence 1: My dog always hurries when the weather gets cold and it hurts more this year than last year
Evidence 2: The weathercoaster predicted that this winter will be colder than last winter

Which evidence supports the conclusion, 1 or 2? Why?

In each case, the children identified Evidence 2 as support for the conclusion. Consequently, the last two examples emphasized the use of measurement in providing the supporting evidence in both cases. The final example concluded with the question, "What if the weather-forecaster had predicted that 'This winter will be colder than last winter' on the grounds that his big toe hurts when the weather gets cold and it hurts more this year than last year? Precipitation answered in unison that any one using that kind of argument does not deserve the title of a weatherforecaster.

The third exercise, based upon one designed for use with Rebecca (R, p. 4) involves several props, specifically, a bag covering a pot which contains six apples and six oranges.

Great Britain and the United States, seven children, all of whom have been through the process of children passed the bag around their circle, holding it and shaking it, smelling it and examining it. They established three pieces of evidence on the basis of their observations:

1. The bag is heavy
2. The object in the bag rattles
3. The object in the bag is green

The first question of the exercise addressed the children's attention to the object inside the bag — "On the basis of the evidence you have, do you think you picked the right or the wrong object?" Several children immediately answered that they would like the object. However, they could not answer the question, "Why?" After struggling to answer it, they admitted that the three pieces of evidence did not support the conclusion about liking or disliking the object. Not enough evidence was available at that point to make such a decision. After removing the pot from the bag, the students once again observed the surprise, but this time at close range. Only one additional piece of evidence emerged from this second observation:

4. The object smells like apples

At this point in the exercise, the children learned from the teacher that twelve small objects rather than one large object filled the pot as he proceeded to write on the blackboard:

Twelve Objects in the Pot

Obj ect 1: Object 7
Obj ect 2: Object 8
Obj ect 3: Object 9
Obj ect 4: Object 10
Obj ect 5: Object 11
Obj ect 6: Object 12

Without delay, the teacher withdrew Object 1, an apple, from the pot and placed it on the table in front of the class. Proceeding with the exercise, the teacher addressing another question to the students — "On the basis of the evidence you now have about Object 1, that it is an apple, can you draw any conclusion about Object 2?"

Most of the children realized that Object 2 would be another apple, but one student guessed an orange while another wished for a banana. Asked if one apple was ample evidence to support any of those claims, including the one urging them that the next object would be a food, the children reconsidered their suggestions, realizing the difficulties of making any substantial prediction at this point of the exercise. However, following the withdrawal of Object 2, another student, the girls, grew in their confidence about predicting Object 3 to be an apple. They were shocked to discover Object 3 to be an orange. At this juncture, the children pondered about a principle of symmetry applied to the arrangement of the objects on the table in front of the pot. For example, seeing two apples and one orange on the table edge, they called for another orange to emerge to balance the orange.
with the apples. After three oranges had been withdrawn in a row, they predicted two apples would follow to match the number of oranges on the table. Shifting the arrange-
ment of apples and oranges elicited different predictions from the children, depending upon the symmetrical prob-
lem facing them. Soon, one student guessed that the pot contained two groups of fruit, apples and oranges, and the exercise ceased. Following the withdrawal of one or another object or group of objects from the pot, the stu-
dents had attempted to reach conclusions in the form of pre-
dictions based upon the evidence at hand.
These three exercises emerged as a result of the desire to
explore the issues related to evidence and proof raised by the author of the paragraph about Leif Ericson in the chapter on "Exploration." In tackling these exercises, the students engaged in inductive reasoning at every turn, the kind of reasoning implied, but not identified, by the au-
тор in necessary for reaching conclusions about Leif Eric-
son's discoveries in Newfoundland. They proved capable of
thinking along these lines in attempting to understand the
differences between strong evidence, and weak evi-
dence for reaching conclusions and constructing proofs.

The collection of six exercises designed specifically for
use with The United States and Its Neighbors meets a
need unfulfilled by the particular set of activities listed at
the end of the chapter on "Exploration." The exercises adapted from philosophy for children programs or created anew add a thinking skills component to the study of the
chapter. Conceptual analysis and inductive reasoning be-
come integral parts of the study of "Exploration" and con-
tinue to play a key role in the discussion of subsequent
chapters in the Social Studies text. Adapting philosophy for
children exercises or creating new ones for use with this
text or others in different subject areas such as history or
science makes analytic thinking an important component
in the general curriculum.
Ron B. Rembert

NOTES
1Timothy M. Helms et al., The United States and Its
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2Timothy M. Helms et al., The United States and Its
Neighbors, pp. 82-83.
3Matthew Lipman, Ann Margaret Sharp, and Frederick S.
Oscanyan, Philosophical Inquiry: An Instructional Manual
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Montclair: The Institute for the Advancement of Philoso-
phy for Children, 1979)
4Rebecca Reed, Rebecca
5Timothy M. Helms et al., The United States and Its Neigh-
bor, p. 64.
6Timothy M. Helms et al., The United States and Its
Neighbors, pp. 66-67.
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OKLAHOMA MEETS HARRY STOTLEMEIER

Sixteen months ago my husband's job required that
our family move from Fort Worth, Texas, where we had
lived for the past seven years, to Edmond, Oklahoma. At
the time this transition, I was teaching English and
analytical thinking to seventh graders at a small
private school in Fort Worth. I had taken teacher training in
analytical thinking while a student at Texas Wesleyan
College; additionally, I had been a graduate assistant in
Wesleyan's analytical thinking program. Therefore, my
interest and involvement in the program were extensive.
Waiting for me in Oklahoma was a job teaching seventh
grade English at Sequoyah Middle School. Sequoyah was
then the only middle school in Edmond, a conservative,
quickly-growing bedroom community north of Oklahoma
City. However, analytical thinking had not been intro-
duced into any Oklahoma schools, and I was reluctant
to move from Fort Worth and turn opportunities to use this
course in my teaching. I was skeptical that the district and
the administrators in Edmond would be receptive to a
 totally new idea in curriculum.

After the initial trauma of moving and adjusting to
a new school had subsided, I was much missed being in-
volved in analytical thinking and decided to approach my
principal, Sandra Brothers, with some of the materials,
handouts, and statistics I had brought from Texas about
the course. To my delight and surprise, Mrs. Brothers
was not simply open about the possibilities for the program
in her school, she was enthusiastic. She envisioned the
program as a possible elective subject for gifted students
in the Edmond School District. In the middle school, the
gifted program had consisted of pulling selected students from
regular classes once or twice per week; students then
worked with a special teacher doing problems and exercises
from critical thinking workbooks. The prospect of a
gifted class was losing its appeal to many gifted students. Mrs.
Brothers looked at a videotape of my Fort Worth class
doing philosophy, read the text, Harry Stottlemeyer's Dis-
covery, and assigned to me the responsibility of the
seventh grade gifted class, an elective called Analytical
Thinking.

A major problem arose immediately following Mrs.
Brothers' decision. With the opening of the 1982/83
school year, Edmond would have another middle school,
Cimarron. District policy states that whatever courses are
offered at one middle school must be available to students at
the other school. Analytical Thinking would have to be
taught at Cimarron, and there was no teacher trained to
 teach the course there.

I shared my enthusiasm for the course with fellow
teachers at Sequoyah, one of whom was scheduled to be
 teaching at Cimarron during the 1982/83 school year.

Donna Pierce, an English teacher, caught the contagion of
my excitement about analytical thinking. After consulting
her principal at Cimarron, Mrs. Pierce arranged to take the
analytical thinking teacher training course offered at Texas
Wesleyan College during the past summer.

It has been a decided joy to help launch the program
of analytical thinking in Oklahoma and to once again do
philosophy with students. The program seems to be off to
to a roaring start here. In my class of twenty-nine students,
fifteen have been identified as gifted. The balance of the
class is made up of high achieving students who applied
for the class as an elective. About fifteen other gifted
students at Sequoyah chose to take another accelerated elec-
tive, Exploratory Reading/Creative Writing.

Making a circle of thirty desks requires the entire
room, but it is worth rearranging the furniture each morn-
ing before and after class. Parents who attended open
house about two weeks after school began were curious,
cautious, but hopeful about the course's potential to hold
their children's interest and to teach them critical thinking
skills. The students were pretested one week into the
course and will be posttested in the spring. Because these
children are so bright and imaginative, it is no small task
to challenge them and to increase their critical thinking
skills. The class goes well, not without hitches, but full of lively
discussion and exciting ideas. A goal of personal interest to
me is to also provide the class to non-gifted students in
Edmond schools.

By late November, Mrs. Brothers and I felt it impor-
tant to survey students' reactions to the analytical class. I
devised a questionnaire for this purpose. The students' an-
onymity was assured; I hoped this guarantee would dic-
it honest responses to questions about the class — about
content, format, value, etc. In addition to choosing an
appropriate available answer to each question, students
were encouraged to add comments to any question. Often
students qualified their choices by explanations. Other-
times they chose not to use available answers, but supplied
their own. Although these random comments may inval-
dicate the scientific value of this evaluation, I feel it is more
worthy to give students an opportunity to comment than
to require them to stick to pre answers. A copy of the eval-
uation results is included at the end of this article.

An interesting addendum to the apparent success of
introducing analytical thinking to this area is that a fellow
teacher, a doctoral student at the University of Oklahoma,
mentioned analytical thinking to her doctoral class in
education. The professor, as well as the other educators
enrolled in the class, showed great curiosity about analy-
tical thinking. She then showed them the videotape of my
Fort Worth class doing philosophy, and they have ex-
pressed interest in learning more about the program.
Perhaps the fur-reaching possibilities for analytical thinking
in Oklahoma have just begun.

Caroline Nickel

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